



An Energy Efficiency Workshop & Exposition

Palm Springs, California

GSA in Atlanta

Getting and Keeping Results with
an ESPC Project



GSA Atlanta ESPC Project

- Energy Savings Performance Contract
- Customer -- GSA, Tim Wisner
- Contractor -- NORESKO, Paul Pimentel
- Chiller Plants -- 3,000 and 2,400 tons
- Lights, Fan/Pump VFD & Ventilation
- Promised \$870,000 in Annual Savings
- Completed Construction May 2000





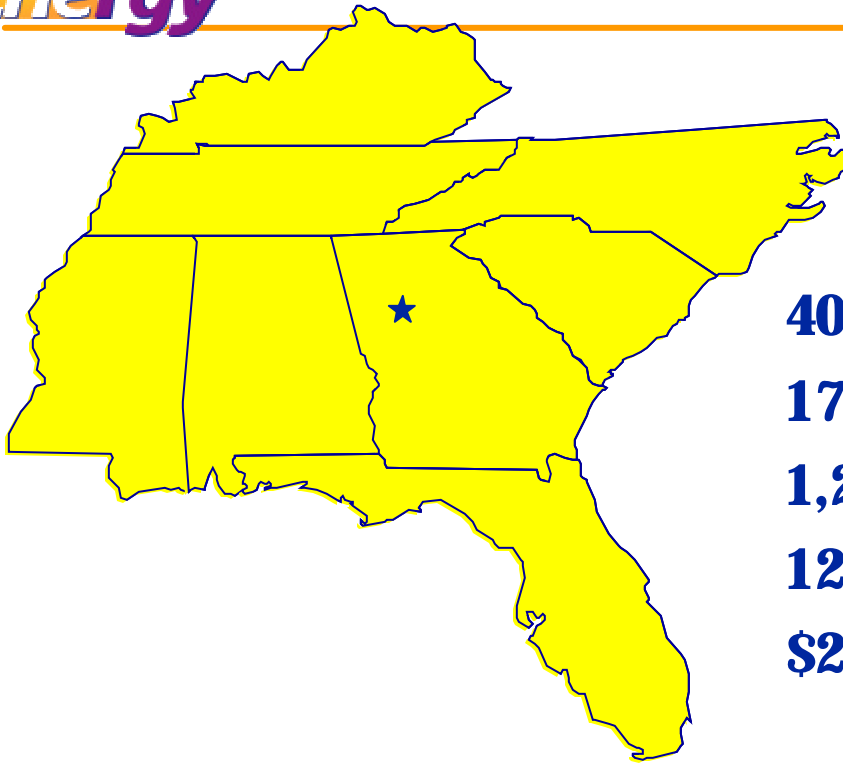
ESPC

- Energy Savings Performance Contract (ESPC)

A contracting method whereby the contractor incurs the cost of implementing an energy savings project in exchange for a share of any direct energy cost savings



Our Regional Stats



40 million square feet

175 building

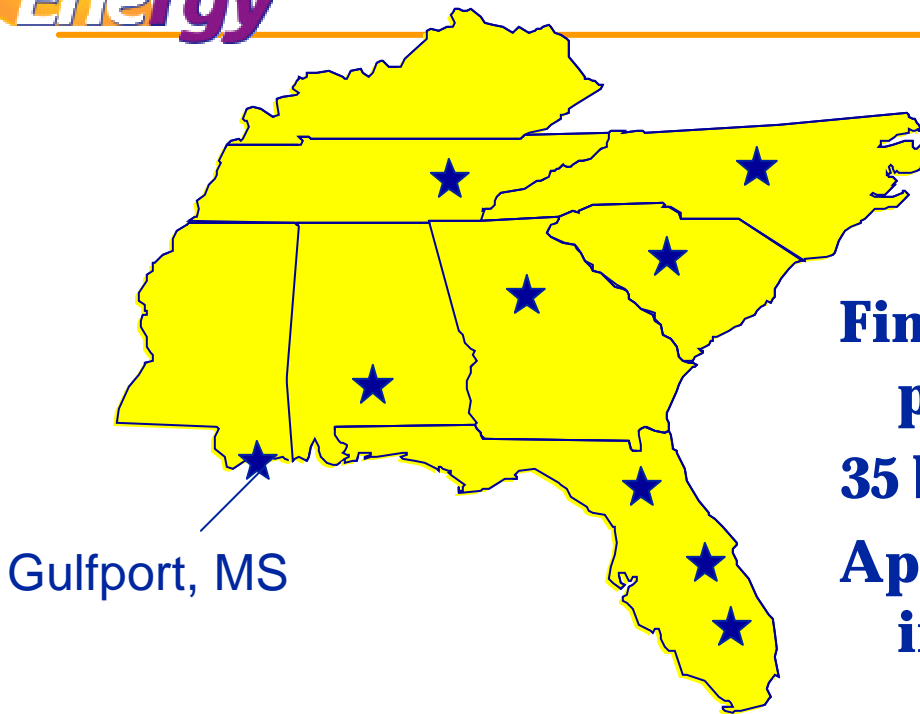
1,200 leases

125,000 tenants

\$20 million budget



We are Just Starting



Gulfport, MS

**Financing energy
projects since 1996
35 buildings
Approx. \$19 million
implementation cost**



GSA Atlanta ESPC Project

- ❑ Our Story Begins at the End
- ❑ Commissioning and Functional Performance
- ❑ Measurement & Verification (M&V)
- ❑ Operations and Maintenance (O&M)
- ❑ Preservation of Out-Year Savings
- ❑ Questions



GSA Atlanta -- Commissioning

- Everything Turns the Right Way
- The Parts Work Together to Achieve the Design Intent Under All Conditions
- The New System Delivers the “Goods”
- Sub-Contractors, Vendors, Engineer, Operator, Commissioning Agent
- Set Up → Test → Debug → Document





GSA Atlanta -- Commissioning

- RBR Chillers, for Example
- Drives, Chillers & Sensors Checked Out
- Two Control Systems to Integrate
- Chiller Capacity & Sequencing Control
- Pump Speed & Hydrodynamics
- Cooling Tower Flow Balance



GSA Atlanta -- M&V

- FEMP Guidelines
- Can the ECM Perform as Designed?
- Can It Generate the Promised Savings?
- What is the *Baseline* Energy Use?
- The *Post-Implementation* Energy Use?
- Reconcile Actual to Promised Savings



GSA Atlanta -- M&V Plan

- ❑ Defines Baseline and Post Energy Use
- ❑ Identifies Significant Savings Variables
- ❑ Assigns Savings Risk
- ❑ Defines What and How We Measure
- ❑ Prescribes Periodic Re-Verification
- ❑ Defines Reports



GSA Atlanta -- M&V Cost/Benefit

- O&M Savings Agreed To
- M&V Target = 5% Savings = \$25,000
- Chillers & Lights use most -- \$21,500
- VFD Target at \$2,700 has room
- OA Target at \$700 not enough but
Other Benefits



GSA Atlanta -- M&V Results

ANNUAL SAVINGS

	<u>Proposed</u>	<u>Verified</u>
kW-Mo	25,000	29,400
MWh	10,000	11,900
Energy Cost	\$500,000	\$589,000
O&M Cost	\$370,000	\$370,000



GSA Atlanta -- O&M

Operation & Maintenance Priorities

	<u>GSA</u>	<u>NORESCO</u>
Happy Tenants	1	3
Control Expense	2	4
Preserve Capital	3	2
Long Term Savings	4	1



GSA Atlanta -- Preservation

- Renovations and Staff Change
- Keeping Track
- Preserving Savings
- Continuous Improvement



GSA Atlanta -- Questions

